

REMARKS

Claims 139 – 144 and 153 – 165 are pending in this application. Support for new claim 166 may be found, for example, in paragraph 30 and 74 of the specification and Fig. 1a. Support for new claim 167 may be found, for example, in Fig. 1a and paragraph 30 of the specification.

CLAIM REJECTIONS – 35 USC §102

Claims 139 and 140 have been rejected under 35 USC 102(b) as being anticipated by Ralston (US Patent No. 1,528,074, hereinafter “Ralston”). This rejection is respectfully traversed.

Claim 139 recites “mechanically driving said flexible member with said normally closed actuator to shut said flow path”; “with said normally closed actuator, mechanically holding said valve closed in an inactive state in which it cannot be operated pneumatically”; and “opening and closing said valve pneumatically.” First, Ralston does not teach mechanically driving a flexible member. Instead, in Ralston, the diaphragm 15 drives stem 14, which is effectively the opposite of a flexible member being driven as recited in claim 139. Second, mechanically driving the diaphragm of Ralston will not result in shutting the flow path.

Furthermore, the claim recites that the normally closed actuator mechanically holds the valve in an inactive state in which it cannot be operated pneumatically (“with said normally closed actuator, mechanically holding”). In Ralston, the latch 17 and finger 19 prevent the valve from operating, not stem 14 or stem 9. Latch 17 and finger 19 are not actuators.

Additionally, in Ralston, the valve is not opened and closed pneumatically. Instead, the valve is opened and closed with the mechanical movement of the system. The inactive state is the result of the mechanical holding of the flexible member. When the holding is released, then the valve may operate via changes in pneumatic pressure on the flexible member. For all of these reasons, claim 139 is patentable over Ralston.

Applicant notes that, all of the limitations of a claim must be considered when weighing the differences between the claimed invention and the prior art in determining the obviousness of a method

claim. MPEP 2116.01 and 2143.03. The prior art reference (or references when combined) must teach or suggest all of the claim limitations. MPEP 2142 and MPEP 2143 – 2143.03. Thus, if even one aspect is not shown in the references, a claim is patentable. Here, since claim 139 has at least three features not shown in Ralston, it is believed to be clearly patentable over Ralston. Claim 140 is patentable at least by virtue of its dependence on claim 139. Reconsideration and withdrawal are respectfully requested.

Applicant has also added claims 166 and 167, which are dependent on claim 139. Claim 166 recites that opening and closing occurs “by deflecting the flexible member using gas pressure.” Ralston does not teach deflecting a flexible member using gas pressure. Furthermore, Ralston does not teach a flexible member closing said flow path as recited in claims 166 and 167.

CLAIM REJECTIONS – 35 USC §103

Claim 141 has been rejected under 35 USC 103(a) as being unpatentable over Ralston in view of Hagendorf (US Patent No. 4,103,864, hereinafter “Hagendorf”). This rejection is respectfully traversed. Claim 139 is patentable over Ralston for the reasons noted above. Hagendorf does not teach any aspects missing from Ralston. Therefore, claim 139 is patentable over Ralston and Hagendorf. Claim 141 is patentable over Ralston and Hagendorf at least by virtue of its dependence on claim 139.

Claims 142 – 144, 153 – 158, 163, and 164 have been rejected under 35 USC 103(a) as being unpatentable over Ralston in view of Chauvigne (US Patent No. 3,957,244, hereinafter “Chauvigne”). This rejection is respectfully traversed. Claim 139 is patentable over Ralston for the reasons noted above. Chauvigne does not teach all aspects missing from Ralston, including but not limited to, “opening and closing said valve pneumatically.” Therefore, claim 139 is patentable over Ralston and Chauvigne. Claims 142 – 144 are patentable over Ralston and Chauvigne at least by virtue of their dependence on claim 139. In respect to claim 153, Ralston and Chauvigne provide no teaching of “pneumatically reducing the force of said valve actuator against said valve diaphragm while changing the pressure in said valve chamber to hold said valve diaphragm closed to create an active shut valve

state.” Therefore, claim 153 is patentable over Ralston and Chauvigne. Claims 154 – 158, 163, and 164 are patentable at least by virtue of their dependence on claim 153.

Claim 165 has been rejected under 35 USC 103(a) as being unpatentable over Ralston in view of Hyun et al. (US Patent No. 6,042,652, hereinafter “Hyun”). This rejection is respectfully traversed. Claim 153 is patentable over Ralston for the reasons noted above. Hyun does not teach any aspects missing from Ralston. Therefore, claim 153 is patentable over Ralston and Hyun. Claim 165 is patentable over Ralston and Hyun at least by virtue of its dependence on claim 153.

Claims 159 – 162 have been objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. This objection is respectfully traversed. Since claim 153 is patentable over the art of record for the reasons noted above, claims 159 – 162 are patentable at least by virtue of their dependence on claim 153. Applicant thanks the Examiner for the cooperative indication of allowable subject matter.

Applicant notes that according to MPEP 2142, the reasons an invention would have been obvious must be clearly articulated.

The key to supporting any rejection under 35 U.S.C. 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious. The Supreme Court in *KSR International Co. v. Teleflex Inc.*, 550 U.S. ___, ___, 82 USPQ2d 1385, 1396 (2007) noted that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit. The Federal Circuit has stated that “rejections on obviousness cannot be sustained with mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006). See also *KSR*, 550 U.S. at ___, 82 USPQ2d at 1396 (quoting Federal Circuit statement with approval).

In respect to many of the claims rejected under the obviousness standard, the Office Action lacks the explicit analysis and reasoning required by the MPEP and KSR. For instance, in respect to claim 153, the Office Action does not address “pneumatically reducing the force of said valve actuator against said valve diaphragm while changing the pressure in said valve chamber to hold said valve diaphragm closed to create an active shut valve state.” In respect to claim 144, the Office Action does

Application No. 10/575,443
Amendment dated August 18, 2009
Reply to Office Action of April 27, 2009

Docket No.: 020008.0116PTUS

not address “coordinated with said releasing, pneumatic pressure is substituted for mechanical pressure to hold said valve closed.” Applicant respectfully requests that subsequent Office Actions explicitly address all aspects of the claims, including but not limited to the aspects identified above, as required by MPEP 2142 and KSR. Since Applicant believes that the art of record does not teach these and other unaddressed aspects of the claims, in the absence of explicit analysis, Applicant is unable to respond completely and clearly to show why the present claims are patentable.

In view of the above amendments and remarks, Applicant believes the pending application is in condition for allowance. A one-month Petition For Extension Of Time and the appropriate fee are attached to this paper. If any additional fee is due, please charge our Deposit Account No. 50-1848, under Order No. 020008.0116PTUS from which the undersigned is authorized to draw.

Respectfully submitted,
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Dated: August 18, 2009

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